CHILE

Air Pollution Equipment

The air pollution equipment market in Chile is expected to grow 30% over the next three years.

Market Overview

- The main decontamination plans are for the transportation and mining sectors.

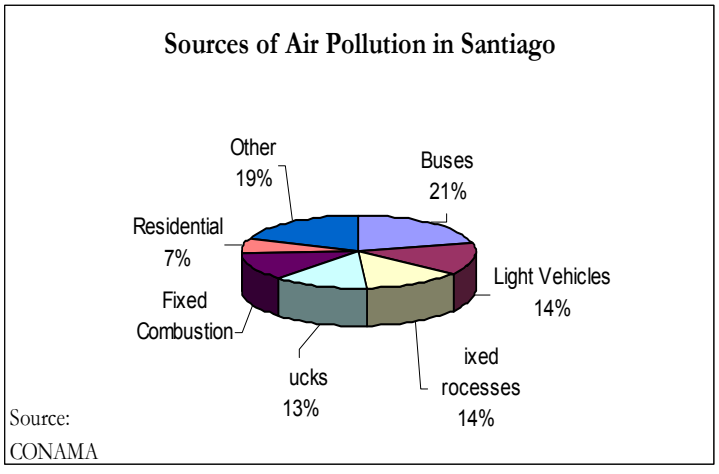
- From the 80's until 2004, Codelco (Chilean National Copper Corporation) invested over US$1.4 billion in decontamination plans in its three copper foundries, Caletones, Ventanas and Chuquicamata's and still has future investment plans.

- An average of US$9.7 million in industrial filters are imported every year for the mining sector.

- Air pollution in Chile is mainly concentrated in the capital, Santiago, and the southern city of Temuco, which have decontamination plans underway.

- In 1996 a Supreme Decree signed by the Chilean President established the Metropolitan Region (Santiago and its surroundings) as an air pollution saturated zone. Since then, the government has been giving incentives to private companies to invest in this sector, and developed the Atmosphere Prevention and Decontamination Plan for the Metropolitan Region (PPDA), which forces factories and companies to reduce contamination.

- Air pollution in Santiago stems from fixed and mobile sources. Moreover, Santiago's location in an enclosed valley with limited wind, limited rainfall, and thermal inversion throughout most of the year, limits the dispersion of emissions from traffic and industry.



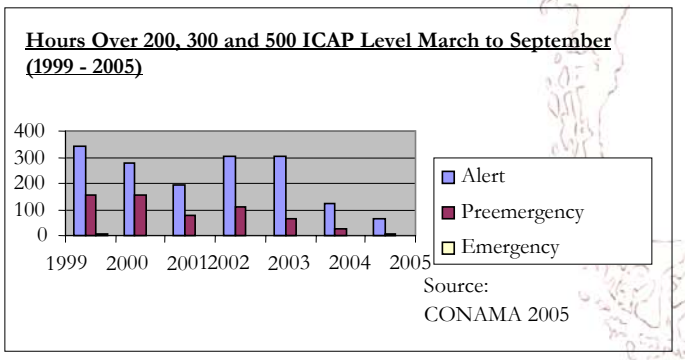
- The existing air quality forecast model in Santiago estimates the next day's maximum levels of the ICAP index (Air Quality by Particulate Material) registered in nine monitoring stations called Net Macam II. This network is controlled by the Metropolitan Environmental and Health Service (SESMA) and was developed in 1997 by the National Environmental Commission ("Conama") and the US expert Joseph Cassmasi.

- Transantiago (part of the PPDA) is a decontamination plan for the Santiago Metropolitan region, elaborated by the Chilean government in order to: reduce 75% of all particulate material emitted, 40% of all nitrogen oxide, and renovate 20% of all Santiago buses by the end of 2005. By 2010, all buses in the Metropolitan region should be replaced. The plan will continue until 2011.

- The implementation of the PPDA norms have made a difference in the air pollution levels. In winter, 2005, only four alerts and nine pre emergency hours were recorded, compared to 23 alerts and 157 pre emergency hours in 1999. Some of the PPDA actions were: withdrawal of contaminating buses, production of the cleanest diesel in Latin America, expansions of the metro line, improvements and expansions of the paved highway system, among others.

- The Street Vacuum and Cleaning Program is operating in 29 municipalities of the Santiago Metro Region, which from March to September 2005 resulted in the cleaning of 8,456 tons of dust.

- New air pollution problems in the Metropolitan region are the lack of natural gas in the country that is forcing industries to use diesel, and the increase of construction projects.



U.S. Position

- Chapter X of the U.S. – Chile Free Trade Agreement identifies eight joint environmental areas of collaboration reflecting environmental priorities and cooperation by both countries.
- Chile, with a few exceptions, does not manufacture pollution control equipment.
- U.S. products are well regarded because of their high technology and quality.

Competitors

- Japan and European countries are strong competitors offering soft loans, grants, and training.
- Like the U.S., Europe is also a major market for absorbers and thermal oxidation systems.
- Chilean players include: SGS Chile Ltda. (environmental services), SK Ecología S.A. (environmental engineering), Siga Consultores Ltda. (environmental consulting), and Ambar S.A. (environmental consulting & engineering)

Principal Sub Sectors

- Equipment
  - High Efficiency
  - Thermal Oxidation
  - Air Filters
  - Absorbers
  - Utility Nitrogen Dioxide Control
  - Nitrogen Oxide Control
  - Particulate Destruction
- Applications
  - Power Plants
  - Chemical Plants
  - Cement plants
  - Commercial / Institutional
  - Pulp Plants
  - Metal Working
  - Mining
  - Technical Services
  - Engineering
  - Consulting

Commercial Opportunities

- Systems to monitor particulate material
- Automotive Emission Control Technology especially related to the conversion of automobiles to natural gas. For details: www.gasco.cl
- Air filters for:
  - Industrial, commercial, and institutional buildings
  - Filters that not only capture but also kill microorganisms
  - Ultra-pure environments such as semiconductor plants; there is a need for filters that do not emit trace compounds such as boron.
- Equipment for the absorption or destruction of gaseous pollutants.
- Nitrogen oxide control products.
- Equipment for the absorption and scrubbing of discharges from chemical plants, pulp mills and other industrial pollution sources.
- New systems using thermal destruction.
- Technical services, engineering, and consulting.

Other Resources

- USDOC International Trade Specialist, Lana Lennberg: Lana.Lennberg@mail.doc.gov
- USDOC International Trade Specialist, Erica Chavez: Erica.Chavez@mail.doc.gov
- Metropolitan Environmental Health Service" (SESMA): www.sesma.cl
- Professionals Association for the Environment (AEPA): www.aepa.cl
- CONAMA (Environmental National Commission) www.conama.cl

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